

Company Directive

ENGINEERING SPECIFICATION EE SPEC: 73/3

Specification for PVC and XLPE Insulated, Single Core General Purpose Cable

Author: Richard Summers

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Approved by



Andrew Reynolds
Engineering Policy Manager

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Target Staff Group	N/A
Impact of Change	Green – No major impact
Planned Assurance checks	N/A

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IMPLEMENTATION PLAN

Introduction

This document defines the PVC insulated single core cables used within NGED and provides a standard with which the Purchasing section can tender.

Main Changes

Updated to enable global tender.

Impact of Changes

No major impact.

Implementation Actions

Immediate.

Implementation Timetable

This policy can be implemented with immediate effect.

REVISION HISTORY

Document Revision & Review Table		
Date	Comments	Author
October 2024	• Rebranded to NGED • Removed replication • Updated cable sizes	Richard Summers/ Marco Williams
April 2020	• Updated in accordance with POL:GE1	Richard Summers
October 2013	• Update of BS numbers and Schedule 1	Richard Summers

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1.0 SCOPE

This Specification deals with NGED's requirements for stranded copper; low voltage polyvinyl chloride (PVC/XLPE) insulated cables suitable for use at a.c. voltages of not greater than 300/500V to earth, which are intended for lighting, internal wiring and electric power system use.

The finished cable shall meet the requirements of BS 6004:, or equivalent standard, except where modified by this Specification.

PVC insulated Non sheathed cables, shall comply with the requirements of BS EN 50525 2-31 clause 4.1.

PVC insulated PVC sheathed cables shall comply with the requirements of table 3 of BS6004.

2.0 VOLTAGE DESIGNATION

The cables are designated using rated voltages, U_0 and U , expressed in the form U_0/U where: -

U_0 relates to the power frequency voltage to earth for which the cable is suitable.

U relates to the power frequency voltage between conductors for which the cable is suitable.

The voltage designations of cables in this standard are: -

450/750V – PVC Non sheathed

300/500V – PVC / PVC

3.0 CONDUCTORS

The conductors of these single core cables shall be Class 2, circular stranded copper or Class 2, circular compacted copper, meeting the requirements of either BS EN 60228 or IEC 60228 or equivalent standard.

Sizes required for PVC Non sheathed cables are: – 2.5, 6, 10, 16 and 35 mm²

Sizes required for PVC / PVC cables are: - 2.5, 4, 6, 10, 25, 35, 70, 120 and 185mm².

4.0 INSULATION

The insulation shall comply with the requirements of BS EN 50525.

The insulation shall be closely applied to the conductor. It shall be possible to remove the insulation without damage to the insulation itself, or the conductor.

The thickness of the insulation shall be as defined by BS6004 table 3 and BS EN 50525 2-31 table 4.1, as appropriate.

5.0 INSULATION COLOUR

Each insulated core shall be identified by colour. The colour shall be either throughout the insulation or on the surface. The colours shall be clearly identifiable and durable.

On core marked with the bi-colour combination green/yellow (as in the case of the PVC Non sheathed cable) the distribution of these colours shall be such that for every 15mm length of core, one of these colours shall cover at least 30% and not more than 70% of the surface of the core, while the other colour covers the remainder of the surface.

6.0 SHEATH

Where required, the sheath shall be PVC complying with BS 7655-4.2 for type 6 material.

The sheath shall be capable of being removed without damage to the insulation underneath.

The thickness of the sheath shall be not less than the value given for each conductor size given in Table 3 of BS 6004.

The sheath shall comply with the appropriate tests defined by table 2 of BS 6004.

7.0 APPROVAL

All cables supplied shall hold the relevant type test approval and it shall be shown to NGED that there is a continuous programme routine testing as detailed in BS 6004 of the cable under offer.

8.0 TESTS

All cables supplied shall hold the relevant type test approval and shall be subjected to the appropriate tests defined BS 6004 table 2.

APPENDIX A

SUPERSEDED DOCUMENTATION

This document supersedes EE SPEC: 73/2 dated April 2020 which has now been withdrawn.

APPENDIX B

RECORD OF COMMENT DURING CONSULTATION

[EE SPEC: 73/3 - Comments](#)

APPENDIX C

KEY WORDS

None.